

REMARKS

Claims 1-23 are pending in the above-identified application. Claims 24-27 are cancelled.

Issues under 35 USC 102(b) and 103(a)

Claims 1, 2, 4, 6, 7 and 12 have been rejected under 35 USC 102(b) as being anticipated by Vishnoi '156 (US 6,348,156).

Claims 3 and 9 have been rejected under 35 USC 103(a) as being unpatentable over Vishnoi '156 in view of O'Connor '327 (US 7,074,327).

Claim 5 has been rejected under 35 USC 103(a) as being unpatentable over Vishnoi '156 in view of Komatsu '433 (US 5,976,433).

Claim 8 has been rejected under 35 USC 103(a) as being unpatentable over Vishnoi '156 in view of Mendel-Hartvig '847 (US 7,018,847).

Claims 10 and 11 have been rejected under 35 USC 103(a) as being unpatentable over Vishnoi '156 in view of Mendel-Hartvig '847 and in view of Leader '864 (US 6,193,864).

Claims 13 and 14 have been rejected under 35 USC 103(a) as being unpatentable over Vishnoi '156 in view of Leader '864.

Claims 24-27 are rejected under 35 USC 103(a) as being unpatentable over Komatsu '433 in view of Anderson '824 (US 5,186,824). Since claims 24-27 have been cancelled, the basis for this rejection has been removed such that it should be withdrawn.

These rejections are traversed based on the following reasons below.

Present Invention and Its Advantages

The present invention, as recited in the above-rejected claims, is directed to a fractionation device that both filters out higher molecular weight protein solutes and allows for detection of lower molecular weight protein solutes by increasing the concentration thereof in a filtrate sample. These objectives are described at pages 10-17 of the present specification and exemplified in the examples described therein. Present claim 1 has been amended in order to clarify these features.

Distinctions over Cited References

Vishnoi '156 is the primary reference relied upon for the above rejections. Vishnoi '156 discloses a blood processing system which can accommodate a membrane blood separation device as noted at the bottom of column 6 thereof.

Vishnoi '156 fails to disclose or suggest the claimed fractionation device of the present invention which produces a filtrate, and from that filtrate, a concentrated solution having a targeted solute concentration that is higher than the concentration in the filtrate. The mere optional existence of a filtering medium in Vishnoi '156 cannot perform all of these functions, since the only consequence of such a component is the production of a filtrate. Vishnoi '156 mentions nothing about increasing a solute concentration from a filtrate. Consequently, significant patentable distinctions exist between the fractionation device of the present invention and Vishnoi '156, such that the anticipation rejections bases thereon must be withdrawn.

Regarding all of the obviousness rejections noted above, it is submitted that all of the other secondary references cited with Vishnoi '156 fail to make up for the deficiencies of Vishnoi '156 as noted immediately above. It is additionally submitted that further distinctions exist over Leader '864 with respect to claims 13 and 14. In this regard, note that Leader '864 fails to disclose or suggest a squeezing member for squeezing the tube of a roller type tube pump. Leader '864 merely discloses the use of a roller, which may correspond to a roller employed in the present invention, but cannot correspond to the squeezing member of the present invention. Additionally, Leader '864 fails to disclose the use of an outer wall of a cartridge as a squeezing member or disposing a tube on an outer wall of a squeezing member. Consequently, numerous and significant patentable distinctions exist between the present invention and all of the cited references such that all of the above-noted rejections must be withdrawn.


It is submitted for the reasons above that the present claims define patentable subject matter such that this application should now be placed in condition for allowance.

If any questions arise in the above matters, please contact Applicant's representative, Andrew D. Meikle (Reg. No. 32,868), in the Washington Metropolitan Area at the phone number listed below.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies to charge payment or credit any overpayment to Deposit Account No. 02-2448 for any additional fees required under 37.C.F.R. §§1.16 or 1.17; particularly, extension of time fees.

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Respectfully submitted,

By 

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